

Work Order ID 128237

Friday, January 30, 2015 12:48:49 PM

Page 1

Item ID: D2741

Accept

Scrap *128237*
N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Replacement Blade

Start Date: 1/13/2015 Start Qty: 2.00

**

Cust Item ID:

Required Date: 1/14/2015 Req'd Qty: 2.00

**

Customer: CHINC01

Reference: RMA RA111933 - RETURN-SCRAP

Approvals:

Process Plan: *MC*Date: *15-1-30* Tooling:

Date:

Run Start *NR1*

QC:

Date: SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D2741

E

100

0.00

100

QC

Quality Control

Memo

0.00

INSPECT RA 1119333 D2741 X 2 B100664/B96414

PARTS CAME IN USED FROM CUSTOMER

EVALUATE THE HARDNESS OF THE BLADES

PARTS SCRAPPED AFTER EVALUATION

SEE ATTACHED HARDNESS REPORT
*Performed by E.D.**Sistodoy (12)*

110

QC21- Final Inspection - Work Order Release

0.00

110

QC

Quality Control

Memo

0.00

MF
15-2-5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

Picklist Print

Friday, January 30, 2015 12:48:49 PM

Work Order ID: 128237

128237

Parent Item: D2741

D2741

Parent Item Name: Replacement Blade

Start Date: 1/13/2015

Required Date: 1/14/2015

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev: D00.11.15Removed P/O turning - in house processEC
IPP Rev: E 06-03-20 As Per Rev C
IPP Rev: F 06.04.20Added grinding after heat treating EC

JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------

D2741

Manufactured

No

Each

22.0000

2

D2741

**

Replacement Blade

Location

Loc Qty

Loc Code

FG

10

100664

3

113640

2

115522

5

ST538

12

125892

12

MF
1x 100664
1x 964146

15-130

DQA: _____ Date: _____



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RA111933 D2741

B100664/B96414

Received @ Dart January 6TH, 2015
Inspected@ Dart January 8TH, 2015

Customer: HELICOPTERS INC.
Customer contact: KEVIN VAN METER
Shipped from: CAHOKIA, ILLINOIS US

Instructions for RA111933 D2741 B100664/B96414

- Parts can in used from client
- Create work order to evaluate the hardness of the blades
- Parts can be scrap after evaluation

128237

Time Estimate = 2 HOURS

Departments Required: QC

Pictures Attached = Yes

QTY INSPECTED = B100664 1x B96414 1x

**THIS INSTRUCTION SHEET MUST
BE ATTACHED TO THE
RESTOCKING WORK ORDER AT
ALL TIMES!!!!**

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Non-Conformance Report

Reviewed
DQA:
Date:

Printed on: Thursday, February 05, 2015

Details			
Raised Date 12/8/2014	Status Open	Owner Forbes, Nigel	Number NCR14-4361
Target Date 1/23/2015	Standard		Severity
Process Customer Feedback		Audit	
Raised By Person Helicopters, Inc.		Raised Against (Department or Supplier) Supplier	Fault Category General\Premature Corrosion/Wear
Details Customer reports excessive wear on brand new D2741 Blades.			
Keywords Case 8618		Product D350-636\D2741	
Document		Root Cause Supplier process	
Closed By	Closed Date	Resolution No-Charge replace	

Corrective Action			
Target Date 1/22/2015	Owner Forbes, Nigel	Closed Date	Closed By
Details			

Actions			
Number	Owner	Target Date	Completed Date
Details		Response	
1	Bellavance, Marc	12/8/2014	12/8/2014
Suspecting that the Blades' hardness is not adequate although W/O's says that they are to drawing. MB proposed to have the worn Blades returned to DART for eval and that we provide replacements to customer on warranty.		Permission to proceed provided by SW. See attached email dated 05/12/2014 @ 9:46 AM.	
2	Renwick, Jennifer	12/8/2014	12/8/2014
Issue RMA for the return of qty(2) D2741 Blades.		RA111933.	
3	Bellavance, Marc	12/8/2014	12/8/2014
Issue no charge.		SO119316.	

4	Downing, Eric M	12/24/2014	1/27/2015
Inspect parts. Verify hardness in various locations. Suggestion is to cut a few slices to verify that hardness is correct from surface to core and determine next course of action.		see attached hardness report	

Verification & Review			
Target Date 1/22/2015	Owner Smith, Patrick	Closed Date	Closed By
Details			

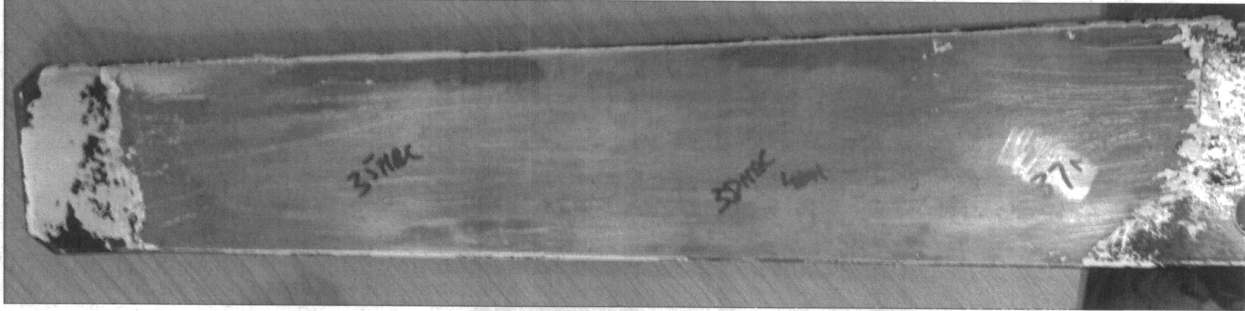
Actions			
Number	Owner	Target Date	Completed Date
Details		Response	

NCR 14-4361 HARDNESS CHECK RA111933

Per NCR 14-4361 hardness check was performed on returned D2741 Blades

- Blades were striped of customer black paint and dart applied powder coating
- Cleaned thoroughly with wash'n'wipe
- Hardness preformed in three locations

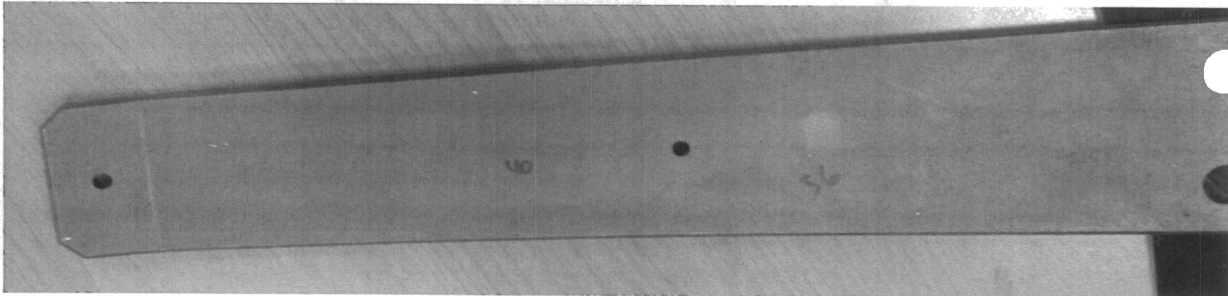
Returned D2741 Blade B97399



Returned D2741 Blade B 104498



Production D2741 Blade B124048



Values preformed from Hardness Test

	<i>HRC TEST #1 / Drawing Value</i>	<i>HRC TEST #2 / Drawing Value</i>	<i>HRC TEST #3 / Drawing Value</i>
D2741 Blade B97399	37 HRC 34-40 HRC	38 HRC 34-40 HRC	35 HRC 34-40 HRC
D2741 Blade B104498	40 HRC 34-40 HRC	40 HRC 34-40 HRC	38 HRC 34-40 HRC
D2741 Blade B124048	38 HRC 34-40 HRC	36 HRC 34-40 HRC	40 HRC 34-40 HRC

Performed By Eric Downing
2015/01/27

REPAIRABLE PART

REPAIRABLE PART

HELICOPTERS INC. Phone: 618.337.2904
5000 Omega Drive Fax: 618.337.7107
Cahokia, IL 62206
Certified Repair Station #DDZR151D

Owner HELICOPTERS INC

Description SPRING BLADE L/H

Part No. D2741

Serial No. BATCH: B104498

Manufacturer DART

TSN 607 TSO — LANDINGS 70
Cycles

Removed from aircraft/engine Info: W/O

Reg # N12FL S/N 2706 ACTT 5956.4

Eng. S/N — TSO —

Discrepancy/Remarks ☐ See back

WORN PREMATURELY

[Signature] [Signature] 12-15-14
Signature Date

HELICOPTERS INC. Phone: 618.337.2904
5000 Omega Drive Fax: 618.337.7107
Cahokia, IL 62206
Certified Repair Station #DDZR151D

Owner HELICOPTERS INC

Description SPRING BLADE R/H

Part No. D2741

Serial No. BATCH B97399

Manufacturer DART

TSN 607 TSO — LANDINGS 70
Cycles

Removed from aircraft/engine Info: W/O

Reg # N12FL S/N 2706 ACTT 5956.4

Eng. S/N — TSO —

Discrepancy/Remarks ☐ See back

WORN BEYOND LIMITS
PREMATURELY.

[Signature] [Signature] 12-15-14
Signature Date